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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,774	12/08/2003	James M. Schreder	120 05866US	3420
128 7590 09/11/2007 HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			EXAMINER NORTON, JENNIFER L	
			ART UNIT 2121	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/729,774

Applicant(s)

SCHREDER ET AL.

Examiner

Jennifer L. Norton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. The following is a **Final Office Action** in response to the Amendment received on 03 August 2007. Claims 2-15 are pending in this application.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 2-7 and 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,881,115 (hereinafter Lipner).
4. As per claim 2, Lipner discloses determining whether said current output is an information type (col. 4, lines 12-13); and marking said current output as complete, if said current output is said information type (col. 4, lines 15-19).
5. As per claim 3, Lipner discloses after the executing step, storing a value of said automatic expression to a destination reference (col. 3, lines 49-51).

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6. As per claim 4, Lipner discloses a control system that uses, sequential control modules, said control system comprising:

a user interface component (col. 3, lines 47-49, Fig. 1, element 33 and 35) that provides at least a table view (Fig. 3), said table view comprising a plurality of outputs of a selected step of at least one of said sequential control modules, wherein said outputs comprise a combination of at least one automatic expression and at least one interactive instruction (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63);

an operator station (Fig. 1, element 19) that executes said user interface component (col. 3, lines 44-47) and that responds to at least one input operator for said interactive instruction (col. 2, lines 27-35, col. 3, lines 58-64, and col. 4, lines 19-22); and

at least one controller (Fig. 1, element 15 and col. 3, lines 18-21) that is operated by executing said interactive instruction at least partly in response to said operator input and said automatic expression automatically (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63).

7. As per claim 5, Lipner discloses a journaling component (Fig. 1, element 37) capable of being executing on said operator station for recording information related to the execution of said sequential control module (col. 3, lines 49-51).

8. As per claim 6, Lipner discloses said table view comprises:

a summary area that provides a name of said sequential control module and a list of steps in said sequential control module, wherein said selected step is selected from said list (col. 2, lines 10-13, col. 4, lines 53-55, col. 5, lines 3-5 and Fig. 3, element 49);

a details area that provides a step name and a step description for said selected step (Fig. 3, element 65); and

a parameters area that provides a current value of at least one parameter associated with said selected step (col. 5, lines 63-65 and Fig. 3, element 67).

9. As per claim 7, Lipner discloses an additional details area (Fig. 3, element 61) for information associated with said selected step (col. 5, lines 53-57).

10. As per claim 9, Lipner discloses said details area includes a confirmation component to receive a confirmation from said operator (col. 6, lines 15-16 and Fig. 3, element 59).

11. As per claim 10, Lipner discloses said user interface component also provides a sequential function chart view (col. 4, lines 2-4 and Fig. 2, element 41).

12. As per claim 11, Lipner discloses a computer readable medium having executable instructions stored thereon to perform a method in a control system that uses sequential control modules, said method comprising:

providing a type indication on a display for an instruction in a sequential control module, said type being confirmable or informational (col.4, lines 12-13); and

receiving a confirmation from an operator before completing said instruction, if said type is confirmable (col. 6, lines 15-16)

at least one of said executable instructions causing an interactive display screen (col. 4, lines 35-39 and Fig. 3) to be presented to an operator that displays a plurality of outputs (col. 4, lines 55-63 and col. 5, lines 62-65) of a selected step of at least one of said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19), wherein said outputs comprise a combination of both automatic expression and at least one interactive instruction (col. 2, lines 27-35 and col. 4, lines 19-22);

at least one of said executable instructions causing a determination of whether a current one of said outputs is an interactive instruction or an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that an interactive instruction will occur);

at least one of said executable instructions causing, if said current output is an interactive instruction, a determination of whether said interactive instruction has been confirmed by said operator (col. 6, lines 15-22);

a marking said current output complete (col. 4, lines 24-25); and

at least one of said executable instructions causing, if said current output is an automatic expression, at least one controller (Fig. 1, element 5) in said control system to execute said automatic expression 9col. 3, liens 13-17 and col. 4, lines 19-20).

13. As per claim 12, Lipner discloses the computer readable medium further comprising: at least one of said executable instructions causing at least one value of a parameter to be associated with at least one of said outputs on said display screen (col. 5, lines 63-65 and Fig. 3, element 67).

14. As per claim 13, Lipner discloses the computer readable medium further comprising: at least one of said executable instructions causing additional information about said current output to be displayed on said display screen (col. 5, lines 53-57 and Fig 3, element 61).

15. As per claim 14, Lipner discloses a method of providing interactive control in a control system that uses sequential control modules, said method comprising:

presenting an interactive display screen (col. 4, lines 35-39 and Fig. 3) to an operator that displays a plurality of outputs (col. 4, lines 55-63 and col. 5, lines 62-65) of a selected step of at least one of said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19), wherein said outputs comprise a combination of at

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least one automatic expression and at least one interactive instruction (col. 2, lines 27-35 and col. 4, lines 19-22);

determining whether a current one of said outputs is an interactive instruction or an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that an interactive instruction will occur);

if said current output is an interactive instruction, determining whether said interactive instruction has been confirmed by said operator (col. 6, lines 15-22);

if said interactive instruction has been confirmed by said operator, marking said current output complete (col. 4, lines 24-25); and

if said current output is an automatic expression, using at least one controller (Fig. 1, element 5) in said control system to execute said automatic expression (col. 3, lines 13-17 and col. 4, lines 19-20).

16. As per claim 15, Lipner discloses a control system that uses sequential control modules, said control system comprising:

an operator station (Fig. 1, element 19) that comprises a user interface component (col. 3, lines 44-47) that provides a display to an operator (Fig. 3) and a program that runs on said operator station an interactive procedure to present on said display a table view (Fig. 3) comprising a plurality of outputs of an operator selected step of at least one of said sequential control modules, wherein said outputs comprise a



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combination of at least one automatic expression and at least one interactive instruction (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63); and

a controller (col. 3, lines 18-21 and Fig. 1, element 15) that executes said automatic expression automatically and said interactive instruction at least partly in response to one or more inputs of said operator to said operator station (col. 2, lines 27-35, col. 3, lines 58-64 and col. 4, lines 19-22).

***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipner in view of U.S. Patent No: 6,775,576 (hereinafter Spriggs).

19. As per claim 8, Lipner does not expressly teach a trend area that provides a graph of said at least one parameter associated with said selected step.

Spriggs teaches to a trend area that provides a graph of said at least one parameter associated with said selected step (col. 19, lines 27-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a trend area to reduce capital cost and the traditional requirement for both expertise and human resources necessary to integrate and maintain prior systems is reduced (col. 2, lines 7-9).

20. If, however the prior art is interpreted differently by a third party, the base reference and secondary reference teach "a display that provides a combination of at least one automatic expression and at least one interactive instruction" as follows:

21. Claims 2-7 and 9-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lipner in view of U.S. Patent No. 4,803,039 (hereinafter Impink).

22. As per claim 2, Lipner teaches as set forth below determining whether said current output is an information type (col. 4, lines 12-13); and marking said current output as complete, if said current output is said information type (col. 4, lines 15-19).

23. As per claim 3, Lipner teaches as set forth below after the executing step, storing a value of said automatic expression to a destination reference (col. 3, lines 49-51).

24. As per claim 4, Lipner teaches a control system that uses, sequential control modules, said control system comprising:

a user interface component (col. 3, lines 47-49, Fig. 1, element 33 and 35) that provides at least a table view (Fig. 3), said table view comprising a plurality of outputs of a selected step of at least one of said sequential control modules (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63);

an operator station (Fig. 1, element 19) that executes said user interface component (col. 3, lines 44-47) and that responds to at least one input operator for said interactive instruction (col. 2, lines 27-35, col. 3, lines 58-64, and col. 4, lines 19-22); and

at least one controller (Fig. 1, element 15 and col. 3, lines 18-21) that is operated by executing said interactive instruction at least partly in response to said operator input and said automatic expression automatically (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

25. As per claim 5, Lipner teaches as set forth above a journaling component (Fig. 1, element 37) capable of being executing on said operator station for recording information related to the execution of said sequential control module (col. 3, lines 49-51).

26. As per claim 6, Lipner teaches as set forth above said table view comprises:  
a summary area that provides a name of said sequential control module and a list of steps in said sequential control module, wherein said selected step is selected from said list (col. 2, lines 10-13, col. 4, lines 53-55, col. 5, lines 3-5 and Fig. 3, element 49);

a details area that provides a step name and a step description for said selected step (Fig. 3, element 65); and

a parameters area that provides a current value of at least one parameter associated with said selected step (col. 5, lines 63-65 and Fig. 3, element 67).

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27. As per claim 7, Lipner teaches as set forth above an additional details area (Fig. 3, element 61) for information associated with said selected step (col. 5, lines 53-57).

28. As per claim 9, Lipner teaches as set forth above said details area includes a confirmation component to receive a confirmation from said operator (col. 6, lines 15-16 and Fig. 3, element 59).

29. As per claim 10, Lipner teaches as set forth above said user interface component also provides a sequential function chart view (col. 4, lines 2-4 and Fig. 2, element 41).

30. As per claim 11, Lipner teaches a computer readable medium having executable instructions stored thereon to perform a method in a control system that uses sequential control modules, said method comprising:

providing a type indication on a display for an instruction in a sequential control module, said type being confirmable or informational (col.4, lines 12-13); and

receiving a confirmation from an operator before completing said instruction, if said type is confirmable (col. 6, lines 15-16)

at least one of said executable instructions causing an interactive display screen (col. 4, lines 35-39 and Fig. 3) to be presented to an operator that displays a plurality of outputs (col. 2, lines 27-35, col. 4, lines 19-22 and lines 55-63 and col. 5, lines 62-65)

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of a selected step of at least one of said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19);

at least one of said executable instructions causing a determination of whether a current one of said outputs is an interactive instruction or an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that an interactive instruction will occur);

at least one of said executable instructions causing, if said current output is an interactive instruction, a determination of whether said interactive instruction has been confirmed by said operator 9col. 6, lines 15-22);

a marking said current output complete (col. 4, lines 24-25); and

at least one of said executable instructions causing, if said current output is an automatic expression, at least one controller (Fig. 1, element 5) in said control system to execute said automatic expression 9col. 3, lines 13-17 and col. 4, lines 19-20).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

31. As per claim 12, Lipner teaches as set forth above the computer readable medium further comprising: at least one of said executable instructions causing at least one value of a parameter to be associated with at least one of said outputs on said display screen (col. 5, lines 63-65 and Fig. 3, element 67).

32. As per claim 13, Lipner teaches as set forth above the computer readable medium further comprising: at least one of said executable instructions causing additional information about said current output to be displayed on said display screen (col. 5, lines 53-57 and Fig 3, element 61).

33. As per claim 14, Lipner teaches a method of providing interactive control in a control system that uses sequential control modules, said method comprising:

presenting an interactive display screen (col. 4, lines 35-39 and Fig. 3) to an operator that displays a plurality of outputs (col. 2, lines 27-35, col. 4, lines 19-22 and

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55-63 and col. 5, lines 62-65) of a selected step of at least one of said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19);

determining whether a current one of said outputs is an interactive instruction or an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that an interactive instruction will occur);

if said current output is an interactive instruction, determining whether said interactive instruction has been confirmed by said operator (col. 6, lines 15-22);

if said interactive instruction has been confirmed by said operator, marking said current output complete (col. 4, lines 24-25); and

if said current output is an automatic expression, using at least one controller (Fig. 1, element 5) in said control system to execute said automatic expression (col. 3, lines 13-17 and col. 4, lines 19-20).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at



the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

34. As per claim 15, Lipner teaches as set forth above a control system that uses sequential control modules, said control system comprising:

an operator station (Fig. 1, element 19) that comprises a user interface component (col. 3, lines 44-49) that provides a display to an operator (Fig. 3) and a program that runs on said operator station an interactive procedure to present on said display a table view (Fig. 3) comprising a plurality of outputs of an operator selected step of at least one of said sequential control modules (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63); and

a controller (col. 3, lines 18-21 and Fig. 1, element 15) that executes said automatic expression automatically and said interactive instruction at least partly in response to one or more inputs of said operator to said operator station (col. 2, lines 27-35, col. 3, lines 58-64 and col. 4, lines 19-22).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

35. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lipner in view of Impink in further view of U.S. Patent No: 6,775,576 (hereinafter Spriggs).

36. As per claim 8, Lipner in view of Impink does not expressly teach a trend area that provides a graph of said at least one parameter associated with said selected step.

Spriggs teaches to a trend area that provides a graph of said at least one parameter associated with said selected step (col. 19, lines 27-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner in view of Impink to include a trend area to reduce capital cost and the traditional requirement for both

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expertise and human resources necessary to integrate and maintain prior systems is reduced (col. 2, lines 7-9).

***Response to Arguments***

37. Applicant's arguments see Remarks pgs. 1-3, filed 03 August 2007 with respect to claims 2-7 and 9-15 under 35 U.S.C. 102(b) have been fully considered but they are not persuasive.

38. Applicant argues that the prior art fails to teach, "a display of a combination of at least one automatic expression and at least on interactive instruction"; the Examiner respectfully disagrees.

The Examiner recognized the Applicant's previous arguments with respect to the limitation "a display of a combination of at least one automatic expression and at least on interactive instruction", and hence made a 35 U.S.C 102(b)/103(a) rejection to clarify the patentably of the claimed limitation. The Examiner asserts the limitations of claims 2-7 and 9-15 of Applicant's claimed invention is disclosed in Lipner as set forth in the 35 U.S.C 102(b) rejection above.

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39. Applicant's arguments see Remarks pgs. 3-4, filed 03 August 2007 with respect to claim 8 under 35 U.S.C. 103(a) has been fully considered but they are not persuasive.

40. In regards to Applicant's arguments, with respect to claim 8, fail to teach the claimed limitations of claim 4, the Examiner refers to the above response, pg. 18, paragraph 38 of this Office action, and the argument herein as addressed.

41. Applicant's arguments see Remarks pgs. 1-3, filed 03 August 2007 with respect to claims 2-15 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

42. In regards to Applicant's argument that that Lipner does not disclose, "a display of a combination of at least one automatic expression and at least one interactive instruction" (see Remarks pg. 2, par. 7), the Examiner recognizes the Applicant has not accounted for the combination of Lipner and Impink under 35 U.S.C 103(a) for this limitation as set forth in claims 4, 11, 14 and 15 of the Non-Final Office Action, mailed on 01 May 2007. Claims 4, 11, 14 and 15 have be copied below for convenience,

As per claim 4, Lipner teaches a control system that uses, sequential control modules, said control system comprising:

a user interface component (col. 3, lines 47-49, Fig. 1, element 33 and 35) that provides at least a table view (Fig. 3), said table view comprising a plurality of outputs of a selected step of at least one of said sequential control modules (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63);

an operator station (Fig. 1, element 19) that executes said user interface component (col. 3, lines 44-47) and that responds to at least one input operator for said interactive instruction (col. 2, lines 27-35, col. 3, lines 58-64, and col. 4, lines 19-22); and

at least one controller (Fig. 1, element 15 and col. 3, lines 18-21) that is operated by executing said interactive instruction at least partly in response to said operator input and said automatic expression automatically (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

As per claim 11, Lipner teaches a computer readable medium having executable instructions stored thereon to perform a method in a control system that uses sequential control modules, said method comprising:

providing a type indication on a display for an instruction in a sequential control module, said type being confirmable or informational (col.4, lines 12-13); and

receiving a confirmation from an operator before completing said instruction, if said type is confirmable (col. 6, lines 15-16)

at least one of said executable instructions causing an interactive display screen (col. 4, lines 35-39 and Fig. 3) to be presented to an operator that displays a plurality of outputs (col. 2, lines 27-35, col. 4, lines 19-22 and lines 55-63 and col. 5, lines 62-65) of a selected step of at least one of said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19);

at least one of said executable instructions causing a determination of whether a current one of said outputs is an interactive instruction or an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that an interactive instruction will occur);

at least one of said executable instructions causing, if said current output is an interactive instruction, a determination of whether said interactive instruction has been confirmed by said operator 9col. 6, lines 15-22);

a marking said current output complete (col. 4, lines 24-25); and

at least one of said executable instructions causing, if said current output is an automatic expression, at least one controller (Fig. 1, element 5) in said control system to execute said automatic expression 9col. 3, lines 13-17 and col. 4, lines 19-20).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

As per claim 14, Lipner teaches a method of providing interactive control in a control system that uses sequential control modules, said method comprising:

presenting an interactive display screen (col. 4, lines 35-39 and Fig. 3) to an operator that displays a plurality of outputs (col. 2, lines 27-35, col. 4, lines 19-22 and 55-63 and col. 5, lines 62-65) of a selected step of at least one of said sequential control modules (col. 3, lines 28-29 and 49-51 and Fig. 1, element 19);

determining whether a current one of said outputs is an interactive instruction or an automatic expression (col. 2, lines 27-35 and col. 4, lines 19-22, i.e. when a state is violated, it is determined that an interactive instruction will occur);

if said current output is an interactive instruction, determining whether said interactive instruction has been confirmed by said operator (col. 6, lines 15-22);

if said interactive instruction has been confirmed by said operator, marking said current output complete (col. 4, lines 24-25); and

if said current output is an automatic expression, using at least one controller (Fig. 1, element 5) in said control system to execute said automatic expression (col. 3, lines 13-17 and col. 4, lines 19-20).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.



Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

As per claim 15, Lipner teaches as set forth above a control system that uses sequential control modules, said control system comprising:

an operator station (Fig. 1, element 19) that comprises a user interface component (col. 3, lines 44-49) that provides a display to an operator (Fig. 3) and a program that runs on said operator station an interactive procedure to present on said display a table view (Fig. 3) comprising a plurality of outputs of an operator selected step of at least one of said sequential control modules (col. 2, lines 27-35 and col. 4, lines 19-22 and 55-63); and

a controller (col. 3, lines 18-21 and Fig. 1, element 15) that executes said automatic expression automatically and said interactive instruction at least partly in

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response to one or more inputs of said operator to said operator station (col. 2, lines 27-35, col. 3, lines 58-64 and col. 4, lines 19-22).

Lipner does not expressly teach a display of a combination of at least one automatic expression and at least one interactive instruction.

Impink teaches to a display of a combination of at least one automatic expression (col. 13, lines 59-62 and col. 14, lines 51-56 and 59-65) and at least one interactive instruction (col. 14, lines 47-50 and 56-59).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Lipner to include a display of a combination of at least one automatic expression a major advantage of the display generated in accordance with the invention is that all of the information is brought to one place for use by the operator (col. 13, lines 52-55).

Furthermore, Lipner discloses (col. 2, lines 27-35) "Some of the procedural steps generate control signals which result in modification of process conditions. Such control signals can be automatically generated by a procedure which is running automatically. Some procedures call for verification that the control signal has been effective before advancing to the next step. In some instances, this may take some time. If the

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condition is not satisfied, the step is violated and the automatic sequencing will terminate requiring operator intervention."

(col. 3, lines 47-49) "This application program 31 implements the two parts of the SSCI, the SSCI Executive Interface 33 and the sequence interface 35."

(col. 4, lines 19-22) "In the "automatic" mode, the SSCI will advance to the next step if the pertinent conditions are verified. If the conditions are violated, however, the procedure will transfer to a "violated" mode which requires operator action."

(col. 4, lines 55-63) "This brings up the Procedure Interface screen 47 which is shown in FIG. 3. This screen is arranged such that the operator may ascertain the relevant information about the procedure, including what mode the procedure is currently in, whether it is in manual or automatic control, and what is the current step of the procedure. Of primary interest are the relevant states of the components and parameters of the current step of the procedure which are displayed textually as well as with color coding."

Impink discloses (col. 13, lines 59-62) "The user is not burdened with remembering whether a parameter or component should be checked; the system does it for him."

(col. 14, lines 47-65) "The numeral "1" indicates that the condition was not verified by the sensors, but that the operator indicated that the recommended manual action had been completed. An "O" indicates that the required action was overridden. Some substeps do not require operator action but indicate whether a particular condition exists or not. An example of this occurs in Step 7. The first substep checks the motor driven auxiliary feedwater pumps as was illustrated by the display of FIG. 3. The "1" indicates that the sensors detected that the pumps were not on, but that the operator indicated that he activated the switches to start them. The second substep of Step 7 determines whether it is necessary to have the turbine driven pump on. The "-2" indicates that it is not necessary. A "-1" would have indicated that it was necessary. The third substep then checks if the turbine driven pump is on. The "2" indicates that the sensors detect that it is on in the situation depicted by the example."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to a control interface system.

U.S. Patent No. 7,209,800 discloses a process and a system for generating or visualizing a control program for a machine tool having at least one sequence of sets of control data for the machining of a workpiece on this machine tool by means of operating units thereof controlled by this control program.

U.S. Patent No. 7,250,856 discloses an alarm display and interface tool for use in a process control system receives and displays different categories of alarms, including for example, device alarms and hardware alarms as well as traditional process alarms, on a single display to enable an operator or other user to view and have access to these different categories of alarms.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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Art Unit 2121